



EuCARD<sup>2</sup> WP11 Topical Meeting  
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# ARIES WP14 – Task 14.4: Industrial production of materials for extreme thermal management

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# WP task 14.4

- **WP14:** Promoting Innovation (PI) – WP leader M. Losasso (CERN). Close relation to industry, final aim to provide society with identified commercial applications of the supported research potential.
- **Task 14.4:** Industrial production of materials for extreme thermal management
  - Contribute to material development in collaboration with **WP17** (PowerMat)
  - Produce at least 10 samples of  $MgB_2$  by Additive Manufacturing on Copper substrate for characterization of the R&D → applications in critical accelerator environments (beam pipes, RF cavities) and other technical domains
  - Demonstrate feasibility of production for industrialisation (with large dimensions, small tolerances)
- **Production objectives:**
  - 30 samples of  $MgB_2$  on metal substrate
  - 30-50 samples of CuCD
  - 40 samples of metal-diamond composite for luminescence studies
  - 50 samples of carbide-graphite or metal-graphite composites
  - 1 large size block of carbide-graphite or metal-graphite composite with tight mechanical tolerance to proof industrialisation

} RHP  
} CERN with industrial partner (BrevettiBizz)





# Deliverable

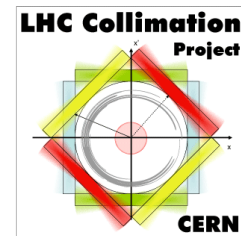
Deliverable Number	Deliverable Title	Lead beneficiary	Type	Dissemination level	Due Date (in months)
D14.3	Production of material samples of carbon-based composites and metal-diamond composites	CERN	Demonstrator	Public	24

## **D14.3 : Production of material samples of carbon-based composites and metal-diamond composites**

- Production of: 50 samples of carbon-based composites with different production cycles and 30 samples of metal-diamond composites, 20 for high energy impact studies and 10 for luminescence studies



ENGINEERING  
DEPARTMENT



Thank you.